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EXAMINER	
LOO, JUVENA W	

ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/744,001	RABIE ET AL.	
	Examiner	Art Unit	
	Juvena W. Loo	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is in response to application filed on December 24, 2003 in which claims 1 to 42 are presented for examination.

Status of Claims

Claims 1 - 42 are pending, of which claims 1 and 21 are in independent form.

Claims 1 - 6, 8 - 9, 13 – 14, 21 – 26, 28 – 29, 33 – 34, and 41 – 42 are rejected under 35 USC 102(b).

Claim 7, 10 – 12, 15 – 20, 27, 30 – 32, 35 – 40 are rejected under 35 USC 103(a).

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 – 17, 19 – 37, and 39 - 42 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 - 40 of Application No. 10/744,000. The conflicting claims are not identical since the current application (No. 10/744,001) is directed to ATM network while the other one is directed to Frame Relay (Application No. 10/744,000). The networks have different functional entities and are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art at the time of the invention to use either ATM or Frame Relay network.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 – 6, 8 – 9, 13 – 14, 21 – 26, 33 – 34, and 31 – 42 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakayama et al. (Pub. Number: 2001/0049739 A1).

Regarding claim 1, Wakayama discloses a method for enabling multiple QoS support over Asynchronous Transfer Mode (ATM) and Ethernet networks comprising:

Identifying a packet according to a first network protocol for servicing (Wakayama: Figure 1, 6-1); determining a QoS metric for the identified packet (Wakayama: Figure 12, 123-5 and 123-6); and based upon the determined QoS metric, servicing the identified packet for transmission in accordance with a second network protocol (Wakayama: Figure 5, 1).

Regarding claim 2, Wakayama discloses all the limitations of claim 1. Additionally, Wakayama discloses the step of determining a QoS metric includes considering Ethernet information (Wakayama: page 3, section 0058: the quality of service (QoS) transformation table for the ATM-based MPLS output is the table for transforming a QoS value of the VLAN network).

Regarding claim 3, Wakayama discloses all the limitations of claim 2. Additionally, Wakayama discloses the Ethernet information includes Ethernet port information (Wakayama: Figure 2).

Regarding claim 4, Wakayama discloses all the limitations of claim 2. Additionally, Wakayama discloses the Ethernet information includes virtual local area network identifier (VLAN ID) information (Wakayama: Figure 2).

Regarding claim 5, Wakayama discloses all the limitations of claim 2. Additionally, Wakayama discloses the Ethernet information includes p-bits information (Wakayama: Figure 2).

Regarding claim 6, Wakayama discloses all the limitations of claim 5. Additionally, Wakayama discloses the Ethernet information further includes VLAN ID information (Wakayama: Figure 2).

Regarding claim 8, Wakayama discloses all the limitations of claim 1. Additionally, Wakayama discloses the step of determining a QoS metric includes considering Upper Layer Protocol (ULP) information (Wakayama: column 7, lines 42 – 59: a destination IP address, type of service value of the IP header and destination port number of the TCP header can be used).

Regarding claim 9, Wakayama discloses all the limitations of claim 8. Additionally, Wakayama discloses the ULP information includes Internet Protocol (IP) packet information (Wakayama: column 7, lines 42 – 59: a destination IP address, type of service value of the IP header and destination port number of the TCP header can be used).

Regarding claim 13, Wakayama discloses all the limitations of claim 1. Additionally, Wakayama discloses the first network protocol is ATM, the second network

protocol is Ethernet, and the step of determining a QoS metric includes considering ATM information (Wakayama: page 7, lines 58 – 59: the QoS information can be associated with the CLP bit in the cell header).

Regarding claim 14, Wakayama discloses all the limitations of claim 13. Additionally, Wakayama discloses the ATM information includes virtual circuit connection information (Wakayama: Figure 5 and Figure 6).

Regarding claim 21, Wakayama discloses a system for enabling multiple QoS support over ATM and Ethernet networks comprising:

an input (Wakayama: Figure 1, 6-1); and control circuitry associated with the input and adapted to: identify a packet according to a first network protocol for servicing (Wakayama: Figure 8, 11 and 12); determine a QoS metric for the identified packet (Figure 12, 123-5 and 123-6); and based upon the determined QoS metric, service the identified packet for transmission in accordance with a second network protocol (Wakayama: Figure 5, 1).

Regarding claim 22, Wakayama discloses all the limitations of claim 21. Additionally, Wakayama discloses the control circuitry is further adapted to consider Ethernet information to determine a QoS metric (page 3, section 0058: the quality of service (QoS) transformation table for the ATM-based MPLS output is the table for transforming a QoS value of the VLAN network).

Regarding claim 23, Wakayama discloses all the limitations of claim 22. Additionally, Wakayama discloses the Ethernet information further includes Ethernet port number information (Wakayama: Figure 2).

Regarding claim 24, Wakayama discloses all the limitations of claim 22. Additionally, Wakayama discloses the Ethernet information further includes VLAN ID information (Wakayama: Figure 2).

Regarding claim 25, Wakayama discloses all the limitations of claim 22. Additionally, Wakayama discloses the Ethernet information further includes p-bits information (Wakayama: Figure 2).

Regarding claim 26, Wakayama discloses all the limitations of claim 25. Additionally, Wakayama discloses the Ethernet information further includes VLAN ID information (Wakayama: Figure 2).

Regarding claim 28, Wakayama discloses all the limitations of claim 21. Additionally, Wakayama discloses the control circuitry is further adapted to consider Upper Layer Protocol (ULP) information to determine a QoS metric (Wakayama: column 7, lines 42 - 59: a destination IP address, type of service value of the IP header and destination port number of the TCP header can be used).

Regarding claim 29, Wakayama discloses all the limitations of claim 28. Additionally, Wakayama discloses the ULP information includes Internet Protocol (IP) information (Wakayama: column 7, lines 42 - 59: a destination IP address, type of

service value of the IP header and destination port number of the TCP header can be used).

Regarding claim 33, Wakayama discloses all the limitations of claim 21. Additionally, Wakayama discloses the first network protocol is ATM, the second network protocol is Ethernet, and wherein the control circuitry is further adapted to consider ATM information to determine a QoS metric (Wakayama: page 7, lines 58 - 59: the QoS information can be associated with the CLP bit in the cell header).

Regarding claim 34, Wakayama discloses all the limitations of claim 23. Additionally, Wakayama discloses the ATM information includes virtual circuit connection information (Wakayama: Figure 5 and figure 6).

Regarding claim 41, Wakayama discloses all the limitations of claim 21. Additionally, Wakayama discloses that the system is located at an edge of a core network (Wakayama: Figure 1, 1-1 and 1-2).

Regarding claim 42, Wakayama discloses all the limitations of claim 21. Additionally, Wakayama discloses that the system is located in a user element (Wakayama: Figure 1, 2-1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 7, 10 – 12, 19 - 20, 27, 30 – 32, and 39 – 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakayama et al (Pub. Number: US 2001/0049739 A1) in view of Yu (Pub. Number: US 2001/0043603 A1).

Regarding claim 7, Wakayama discloses all the limitations of claim 5. However, Wakayama fails to teach that the step of servicing further includes assigning a drop precedence to the packet based on the p-bits information. In the same field of endeavor, Yu discloses the use of priority information to determine the drop precedence (Yu: page 25, section 553: using the VLAN priority tag, the user can map the transmission priority and assign the dropping precedence). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the p-bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 10, Wakayama discloses all the limitations of claim 9. However, Wakayama fails to teach that the IP packet information includes Differentiated Services Code Point (DSCP) bit information. In the same field of endeavor, Yu discloses the DSCP bit information in the IP header (Yu: page 25, section 553: the frame entry into high or low priority queue is controlled by either the VLAN priority tag information or the Type of Service/Differentiated Service field in the IP header). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the

DSCP bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 11, Wakayama and Yu disclose all the limitations of claim 10. Additionally, Wakayama discloses the IP packet information further includes VLAN ID information (Wakayama: Figure 2).

Regarding claim 12, Wakayama and Yu disclose all the limitations of claim 10. However, Wakayama fails to teach that the step of servicing further includes assigning a drop precedence to the packet the based on the DSCP bit information. In the same field of endeavor, Yu discloses the use of DSCP bit in mapping a drop precedence (Yu: page 25, section 553: the system uses TOS/ DS coding point field to map quality of service (QoS) such as the transmission queue priority as well as a frame drop precedence). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the DSCP bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 19, Wakayama and Yu disclose all the limitations of claim 1. However, Wakayama fails to teach that the first network protocol is ATM and the second network protocol is Ethernet and the step of servicing includes mapping the packet to an Ethernet port and scheduling the packet for transmission according to a class scheduling scheme. In the same field of endeavor, Yu discloses the use of Weighted Round Robin and Weighted Random Early Detection/Drop to schedule frames for transmission (Yu: page 25, section 553). Thus, it would have been obvious

to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 20, Wakayama and Yu disclose all the limitations of claim 1. However, Wakayama fails to teach that the first network protocol is ATM and the second network protocol is Ethernet and the step of servicing includes mapping the packet to one of a plurality of Ethernet ports and scheduling the packet for transmission according to a basic scheduling scheme. In the same field of endeavor, Yu discloses the use of Weighted Round Robin and Weighted Random Early Detection/Drop to schedule frames for transmission (Yu: page 25, section 553). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 27, Wakayama discloses all the limitations of claim 25. However, Wakayama fails to teach that the control circuitry is further adapted to assign a drop precedence to the packet based on the p-bits information. In the same field of endeavor, Yu discloses the use of priority information to determine the drop precedence (Yu: page 25, section 553: using the VLAN priority tag, the user can map the transmission priority and assign the dropping precedence). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the p-bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 30, Wakayama discloses all the limitations of claim 29. However, Wakayama fails to teach that the IP packet information includes Diff-Serv Differentiated Services Code Point (DSCP) bit information. In the same field of endeavor, Yu discloses the DSCP bit information in the IP header (Yu: page 25, section 553: the frame entry into high or low priority queue is controlled by either the VLAN priority tag information or the Type of Service/Differentiated Service field in the IP header). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the DSCP bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 31, Wakayama and Yu disclose all the limitations of claim 30. Additionally, Wakayama discloses the IP packet information further includes VLAN ID information (Wakayama: Figure 2).

Regarding claim 32, Wakayama and Yu disclose all the limitations of claim 30. However, Wakayama fails to teach the control circuitry is further adapted to assign a drop precedence to the packet based on the DSCP bit information. In the same field of endeavor, Yu discloses the use of DSCP bit in mapping a drop precedence (Yu: page 25, section 553: the system uses TOS/ DS coding point field to map quality of service (QoS) such as the transmission queue priority as well as a frame drop precedence). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the DSCP bits information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 39, Wakayama and Yu disclose all the limitations of claim 21. However, Wakayama fails to teach the first network protocol is ATM and the second network protocol is Ethernet and the control circuitry is further adapted to map the packet to an Ethernet port and schedule the packet for transmission according to a class scheduling scheme to service the packet. In the same field of endeavor, Yu discloses the use of Weighted Round Robin and Weighted Random Early Detection/Drop to schedule frames for transmission (Yu: page 25, section 553). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 40, Wakayama and Yu disclose all the limitations of claim 21. However, Wakayama fails to teach that the first network protocol is ATM and the second network protocol is Ethernet and the control circuitry is further adapted to map the packet to one of a plurality of Ethernet ports and schedule the packet for transmission according to a basic scheduling scheme to service the packet. In the same field of endeavor, Yu discloses the use of Weighted Round Robin and Weighted Random Early Detection/Drop to schedule frames for transmission (Yu: page 25, section 553). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

1. Claims 15 – 18, and 35 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakayama et al (Pub. Number: US 2001/0049739 A1) in view of Fan (Patent Number: US 6,324,165 B1).

Regarding claim 15, Wakayama discloses all the limitations of claim 13. However, Wakayama fails to teach the step of servicing further includes assigning a drop precedence to the packet based on cell loss priority bit information. In the same field of endeavor, Fan discloses the use of the cell loss priority bit for selecting which cell to drop first (Fan: column 3 lines 47 - 49: cells tagged as low priority with the cell loss priority bit set to one, are dropped when a queue exceeds a threshold). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the cell loss priority bit information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 16, Wakayama discloses all the limitations of claim 1. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the step of servicing includes mapping the packet to a VCC and scheduling the packet for transmission according to a non-interleaving sub-connection scheduling scheme. In the same field of endeavor, Fan discloses a per virtual channel queuing for transmission (Fan: Figure 2a and column 5, lines 31 – 32). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 17, Wakayama discloses all the limitations of claim 1. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the step of servicing includes mapping the packet to one of a plurality of VCC's and scheduling the packet for transmission according to a connection scheduling scheme. In the same field of endeavor, Fan discloses a per class queuing according to output port for transmission (Fan: Figure 2b and column 5, lines 36 – 47). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 18, Wakayama discloses all the limitations of claim 1. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the step of servicing includes mapping the packet to a virtual path (VP) and scheduling the packet for transmission according to a sub-connection scheduling scheme. In the same field of endeavor, Fan discloses a per class queuing according to output line for transmission (Fan: Figure 2c and column 5, lines 48 – 58). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 35, Wakayama discloses all the limitations of claim 33. However, Wakayama fails to teach the control circuitry is further adapted to assign a drop precedence based on CLP bit information. In the same field of endeavor, Fan

discloses the use of the cell loss priority bit for selecting which cell to drop first (Fan: column 3 lines 47 - 49: cells tagged as low priority with the cell loss priority bit set to one, are dropped when a queue exceeds a threshold). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the cell loss priority bit information into system of Wakayama. The motivation would have been in providing congestion control.

Regarding claim 36, Wakayama discloses all the limitations of claim 21. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the control circuitry is further adapted to map the packet to a VCC and schedule the packet for transmission according to a non-interleaving sub-connection scheduling scheme to service the packet. In the same field of endeavor, Fan discloses a per virtual channel queuing for transmission (Fan: Figure 2a and column 5, lines 31 – 32). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 37, Wakayama discloses all the limitations of claim 21. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the control circuitry is further adapted to map the packet to one of a plurality of VCC's and schedule the packet for transmission according to a connection scheduling scheme to service the packet. In the same field of endeavor, Fan discloses a per class queuing according to output port for transmission (Fan: Figure 2b and column 5, lines 36 – 47). Thus, it would have been obvious to one of ordinary

skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Regarding claim 38, Wakayama discloses all the limitations of claim 21. However, Wakayama fails to teach the first network protocol is Ethernet and the second network protocol is ATM and the control circuitry is further adapted to map the packet to a virtual path (VP) and schedule the packet for transmission according to a sub-connection scheduling scheme to service the packet. . In the same field of endeavor, Fan discloses a per class queuing according to output line for transmission (Fan: Figure 2c and column 5, lines 48 – 58). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the scheduling schemes into system of Wakayama. The motivation would have been in providing efficient data transmission.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juvena W. Loo whose telephone number is (571) 270-1974. The examiner can normally be reached on Mon.-Thurs : 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frantz Coby can be reached on (571) 272-4017. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Juvena W Loo
Examiner
Art Unit 2609

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SUPERVISORY PATENT EXAMINER